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1. (Twice amended) A Cottrell current-type biosensing cell assembly comprising:

a. a substrate having a proximal end and a distal end;

b. a measurement loop located on the substrate, the measurement loop including:

i. a pair of spaced-apart conductors each having a proximal end and a distal end, the proximal ends located at the proximal end of the substrate for connection to an instrument,

ii. a test cell connected across the distal ends of the conductors, the test cell having an analyte reaction zone with an electrical impedance that varies in response to analyte concentration, the variation in electrical impedance of the analyte reaction zone in response to the application of an analyte, the concentration of which is to be determined, producing a Cottrell current-like profile; and

c. a noise cancellation loop electrically distinct from the analyte reaction zone and physically arranged to be exposed to substantially the same electromagnetic environment as the measurement loop and electrically connected to substantially cancel the effect of electromagnetically propagated field energy irradiating the biosensor cell assembly.

2. (As originally filed) The biosensing cell assembly of claim 1 wherein the noise cancellation loop is on the substrate.

3. (As originally filed) The biosensing cell assembly of claim 2 wherein the measurement loop and the noise cancellation loop are on the same side of the substrate.

4. (As originally filed) The biosensing cell assembly of claim 3 wherein the measurement loop and the noise cancellation loop circumscribe generally the same area.

5. (As originally filed) The biosensing cell assembly of claim 3 wherein the measurement loop and the noise cancellation loop are located adjacent each other.

6. (As originally filed) The biosensing cell assembly of claim 2 wherein the measurement loop and the noise cancellation loop are on opposite sides of the substrate.

7. (As originally filed) The biosensing cell assembly of claim 6 wherein the measurement loop and the noise cancellation loop are substantially congruent.

8. (As originally filed) The biosensing cell assembly of claim 1, further comprising an instrument electrically connectable to the measurement loop, and further wherein the noise cancellation loop is located on a structure adjacent the measurement loop when the measurement loop is connected to the instrument.

9. (As originally filed) The biosensing cell assembly of claim 8 wherein the noise cancellation loop is substantially congruent to the measurement loop.

10. (As originally filed) The biosensing cell assembly of claim 1 wherein the measurement loop is physically arranged to have a first current induced therein having a first phase associated therewith when exposed to an ambient electromagnetic field and wherein the noise cancellation loop is physically arranged to have a second current induced therein, the second current having a second phase associated therewith when the noise cancellation loop is exposed to the same ambient electromagnetic field and wherein the first and second currents are combined to substantially reduce the effect of the ambient electromagnetic field on the biosensing cell assembly.

11 (As originally filed) The biosensing cell of claim 10 wherein the first and second currents are combined to substantially cancel the effect of the ambient electromagnetic field on the biosensing cell assembly.

12. (As originally filed) The biosensing cell assembly of claim 10 further including means for determining a response current to provide an indication of an analyte concentration.

13. (As originally filed) The biosensing cell assembly of claim 12 wherein the means for determining the response current comprises a voltage source to apply a voltage across the test cell via the pair of conductors in the measurement loop and an amplifier connected to amplify the response current resulting therefrom.

14. (As originally filed) The biosensing cell assembly of claim 13 wherein the measurement loop and the noise cancellation loop are physically arranged to have the phase of the second current displaced by 180 degrees from the phase of the first current and the measurement loop and the noise cancellation loop are electrically connected to add the first and second currents together.

15. (As originally filed) The biosensing cell assembly of claim 13 wherein the measurement loop and the noise cancellation loop are physically arranged to have the first and second currents in phase with each other and the measurement loop and the noise cancellation loop are electrically connected to subtract the second current from the first current.

16. (As originally filed) The biosensing cell assembly of claim 1 wherein the electrical impedance of the test cell varies within a predetermined range in response to various concentrations of the analyte.

17. (As originally filed) The biosensing cell assembly of claim 16

wherein a predetermined impedance is included in the noise cancellation loop.

18. (As originally filed) The biosensing cell assembly of claim 17 wherein the predetermined impedance included in the noise cancellation loop is within the impedance range of the test cell when the test cell is amperometrically monitoring a response current to provide an indication of the analyte concentration.

19. (As originally filed) The biosensing cell assembly of claim 17 wherein the impedance in the noise cancellation loop is substantially frequency independent.

20. (As originally filed) The biosensing cell assembly of claim 17 wherein the noise cancellation loop has a pair of conductors, and the combination of the impedance in the noise cancellation loop, together with the conductors of the noise cancellation loop, has substantially the same frequency response characteristics as the combination of the test cell and conductors of the measurement loop.

21. (Cancelled without prejudice by this amendment)

22. (Cancelled without prejudice by this amendment)

23 (Cancelled without prejudice by this amendment)

24. (New) A method for adjusting the output of a Cottrell current-type biosensing cell assembly comprising:

a. a substrate having a proximal end and a distal end;

b. a measurement loop located on the substrate, the measurement loop including:

i. a pair of spaced-apart conductors each having a proximal end and a distal end, the proximal ends located at the proximal end of the substrate for connection to an instrument,

ii. a test cell connected across the distal ends of the conductors, the test cell having an analyte reaction zone with an electrical impedance that varies in response to analyte concentration, the variation in electrical impedance of the analyte reaction zone in response to the application of an analyte, the concentration of which is to be determined, producing a Cottrell current-like profile; the method including

c. providing a noise cancellation loop electrically distinct from the analyte reaction zone and physically arranged to be exposed to substantially the same electromagnetic environment as the measurement loop and electrically connected to substantially cancel the effect of electromagnetically propagated field energy irradiating the biosensor cell assembly.

25. (New) The method of claim 24 wherein providing a noise cancellation

loop comprises providing a noise cancellation loop on the substrate.

26. (New) The method of claim 25 wherein providing the noise cancellation loop comprises providing a noise cancellation loop on the same side of the substrate as the measurement loop.

27. (New) The method of claim 26 wherein providing the noise cancellation loop comprises providing a noise cancellation loop that circumscribes generally the same area as the measurement loop.

28. (New) The method of claim 26 wherein providing the noise cancellation loop comprises providing a noise cancellation loop adjacent the measurement loop.

29. (New) The method of claim 25 wherein providing the noise cancellation loop comprises providing a noise cancellation loop on an opposite side of the substrate from the measurement loop.

30. (New) The method of claim 29 wherein providing the noise cancellation loop comprises providing a noise cancellation loop which is substantially congruent with the measurement loop.

31. (New) The method of claim 24, further comprising providing an instrument electrically connectable to the measurement loop, and providing the noise cancellation loop comprises providing a noise cancellation loop on a structure adjacent the measurement loop when the measurement loop is connected to the instrument.

32. (New) The method of claim 31 wherein providing the noise cancellation loop comprises providing a noise cancellation loop which is substantially congruent to the measurement loop.

33. (New) The method of claim 24 wherein the measurement loop is physically arranged to have a first current induced therein having a first phase associated therewith when exposed to an ambient electromagnetic field and wherein providing the noise cancellation loop comprises providing a noise cancellation loop which is physically arranged to have a second current induced therein, the second current having a second phase associated therewith when the noise cancellation loop is exposed to the same ambient electromagnetic field and combining the first and second currents to substantially reduce the effect of the ambient electromagnetic field on the biosensing cell assembly.

34 (New) The method of claim 33 wherein combining the first and second currents to substantially reduce the effect of the ambient electromagnetic filed on the biosensing cell assembly comprises combining the first and second currents to substantially

cancel the effect of the ambient electromagnetic field on the biosensing cell assembly.

35. (New) The method of claim 33 further including determining a response current to provide an indication of an analyte concentration.

36. (New) The method of claim 35 wherein determining the response current comprises providing a voltage source to apply a voltage across the test cell via the pair of conductors in the measurement loop and providing an amplifier connected to amplify the response current resulting therefrom.

37. (New) The method of claim 36 comprising arranging the measurement loop and the noise cancellation loop physically so that the phase of the second current is displaced by 180 degrees from the phase of the first current and electrically connecting the measurement loop and the noise cancellation loop to add the first and second currents together.

38. (New) The method of claim 36 comprising physically arranging the measurement loop and the noise cancellation loop so that the first and second currents are in phase with each other and electrically connecting the measurement loop and the noise cancellation loop to subtract the second current from the first current.

39. (New) The method of claim 24 wherein the electrical impedance of the test cell varies within a predetermined range in response to various concentrations of the analyte, providing a noise cancellation loop including providing in the noise cancellation loop a predetermined impedance.

40. (New) The method of claim 39 wherein providing in the noise cancellation loop a predetermined impedance comprises providing in the noise cancellation loop a predetermined impedance within the predetermined range of the electrical impedance of the test cell.

41. (New) The method of claim 39 wherein providing in the noise cancellation loop a predetermined impedance comprises providing in the noise cancellation loop a predetermined impedance which is substantially frequency independent.

42. (New) The method of claim 39 wherein providing a noise cancellation loop comprises providing a noise cancellation loop having a pair of conductors, the combination of the predetermined impedance and the pair of conductors of the noise cancellation loop having a frequency response characteristics which is substantially the same as the frequency response characteristic of the combination of the test cell and conductors of the measurement loop.